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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,330	09/30/2003	A. Daniel Feller	42P17275	6479

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EXAMINER

GEORGE, PATRICIA ANN

ART UNIT PAPER NUMBER

1765

DATE MAILED: 10/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/676,330

Applicant(s)

FELLER ET AL.

Examiner

Patricia A. George

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 11-35 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3-14-05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Election, of Group I, was made **without** traverse in the reply filed on 1 September 2005. Claims 11-35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim.

Claim Objections

As to claim 6, there appears to be two typos: the claim states a dependency on claim 1, when clearly the dependency should be on claim 4; and the claim uses the term “**form**” when --*from*-- is intended. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1, is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. As to claim 1, the end of the claim is missing, which is also the closing point of a range. The examiner will assume the applicant intended to end the claim with -- 8. --. Appropriate correction is required.

Claims 5, 6, 8, and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 5, 6, 8, and 10 do not use proper language for Markush groups. Please see MPEP 217.05 (h) for acceptable forms of Markush language.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaufman et al. of US 6,217,416.

Kaufman discloses a CMP slurry used for polishing substrates that include metals (col.1, l.1), at a pH of 4-9 (col.16, l.12), as in claim 1. Kaufman teaches a slurry chemistry that includes: abrasives, such as alumina, silica, zirconia, or ceria (col. 9, l.36-37), as in claims 1 and 8; periodic acids (col.7, l.62-63), as in claim 1; a corrosion inhibitor, such as BTA (col.8, l.46), as in claims 2 and 3; organic acids (col.9, l.27), such as citric acid and acetic acid (col.8, l.18-19), as in claims 4 and 8; salts of the organic acids (col.8, l.21), as in claim 4; a surfactant (col.9, l.13-14), as in claim 9;

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates

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of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufman et al. of US 6,217,416 in view of Lee of US 6,077,337.

Kaufman does not teach specific types of potassium salts (col.11, l.2-3), as in claim 6.

Lee teaches a slurry for use with metallic surfaces that uses of both potassium citrate and potassium acetate (col.5, 17-19).

It would have been obvious to one of ordinary skill in the art at the time of invention was made, to include names of specific potassium salts, as Lee, when making a CMP slurry, as Kaufman, because Lee teaches is serves to stabilize the slurry, which is a known process improvement.

Claim Rejections - 35 USC § 103

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufman et al. of US 6,217,416.

Kaufman teaches the slurry comprises 0.3 to 30 weight percent (col.8, 12) of periodic acid, which appears to overlap the claimed units of 0.005M to about 0.05M, as in claim 7.

It would have been obvious to one of ordinary skill in the art at the time of invention was made, to select any overlapping amount/concentration, disclosed by Kaufman, because it has been held that overlapping ranges are obvious.

Claim Rejections - 35 USC § 103

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufman et al. (see discussion above) in view of Sachan et al. of US 6,693,035.

Kaufman does not teach the use of cetyl-trimethyl ammonium hydroxide.

Sachan teaches methods to control the removal rate of metal polishing (ab.), including a slurry comprising the known surfactant of cetyl-trimethyl ammonium hydroxide, as in claim 10.

It would have been obvious to one of ordinary skill in the art at the time of invention was made, to include cetyl-trimethyl ammonium hydroxide, as Sachan, when forming a slurry for metal polishing, because Sachan teaches it is a robust process capable of generating improved polishing results, which is a known process improvement.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: 4,315,856 and 6,913,825 also teach use of cetyl-trimethyl ammonium hydroxide for CMP slurry.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia A. George whose telephone number is (571) 272-5955. The examiner can normally be reached on weekdays between 7:00am and 4:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571)272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



PAG
09/05

Patricia A George
Examiner
Art Unit 1765

NADINE G. NORTON
SENIOR PATENT EXAMINER
